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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CALDWELL, ANDREW T

ART UNIT

PAPER NUMBER

2154

DATE MAILED: 08/23/2002

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Handwritten mark

Office Action Summary

Application No.
09/431,357

Applicant(s)
Chebrolu

Examiner
Andrew Caldwell

Art Unit
2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jun 4, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

Part III DETAILED ACTION

Remarks

1. Claims 1-17 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 8-11, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over White et al., U.S. Patent No. 5,933,490, in view of Fratto, M., More than Throughput: Managed Modem Chassis, Network Computing, vol. 7, no. 17, pp. 1-5, Nov. 1996, and further in view of Carson et al., U.S. Patent No. 4,629,832.

4. Regarding claim 1, the preamble will be given patentable weight since the claim body refers back to the preamble at line 6. See the service request switch. White teaches the invention substantially as claimed by disclosing an access server (Fig. 7

elems. 96 & 98) having associated channels (Fig. 7 elem. 94), the access server being operatively coupled with a service request switch (Fig. 7 elem. 54; Col. 15 lines 13-35).

5. White not teach the method steps listed in lines 4-9 of claim 1.

6. Fratto on the other hand teaches an access server with the ability to busy out all modems (i.e., associated channels) of a server when a system manager manually initiates preventive maintenance (p. 3 5th complete paragraph). Fratto therefore teaches the method step of a system manager manually determining whether off-line maintenance is needed on a network access server and, if so, suggests the general idea of busying out the modems/channels prior to taking the access server offline for maintenance.

7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Fratto with the access server of White because of Fratto's teaching that this capability is a *basic* modem management function (p. 3 5th complete paragraph).

8. The combination of White in view of Fratto does not teach the specific steps of busying out the system, which are:

a. Communicating a busy condition of any unused associated channel from the network access server to the service request switch;

b. Monitoring any used associated channel and waiting until the used associated channel becomes substantially unused;

c. When the unused associated channel becomes substantially unused, communicating a busy condition of such then-unused channel from the network access server to the service request switch;

d. Signaling that maintenance on the network access server can be performed.

9. Carson on the other hand teaches a method for busying out the channels of a network device (Col. 10 line 56 to Col. 11 line 24), comprising:

a. Communicating a busy condition of any unused associated channel from the network device to the service request switch (Col. 10 lines 57-61);

b. Monitoring any used associated channel and waiting until the used associated channel becomes substantially unused (Col. 11 lines 9-12; Fig. 5 loop between elem. 511 no path and elem. 520 no path shows the system looping or waiting until the CO line is idle);

c. When the unused associated channel becomes substantially unused, communicating a busy condition of such then-unused channel from the network access server to the service request switch (Fig. 5 elems. 510-513; Col. 10 line 56 to Col. 11 line 16);

d. Signaling that maintenance on the network device can be performed (Col. 11 lines 12-16 audible alert).

10. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of White in view of Fratto by substituting Carson's specific teachings for busying out a network device for the combination's general teaching of busying out the network access server, thereby teaching the invention as claimed. This combination would have been obvious because of Carson's teaching that its method reduces interruptions to users of the system (Col. 1 lines 19-24).

11. Regarding claim 2, the combination of White in view of Fratto and further in view of Carson teaches the invention substantially as claimed. See the rejection of claim 1 above. The combination as applied to claim 1 above does not teach the additional step of claim 2. Carson on the other hand teaches a method, which after completion of the maintenance, further comprises communicating an idle condition of any associated

channel to the service request switch (Col. 1 lines 51-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Carson's teaching regarding returning the state of the channels to idle after completing maintenance with the method of the combination of White in view of Fratto and further in view of Carson because returning the channels to the idle state allows the network access server to receive calls again, and thereby perform its intended function.

12. Regarding claim 3, the combination of White in view of Fratto and further in view of Carson, as applied to claim 2 above, teaches the invention substantially as claimed. The combination of White in view of Fratto and further in view of Carson does not explicitly teach the additional limitation of claim 3. White does however teach that the central office switching system is connected to the access server via POTS or plain old telephone service connections (Col. 15 lines 13-16). Official notice is hereby taken of the fact that POTS connections use a standard signaling protocol to communicate the status of associated channels. White therefore teaches a system in which a standard communication protocol is used to communicate between the network access server and the service request switch. It would have been obvious to one of ordinary skill in the art at

the time the invention was made to use the standard signaling protocol to communicate the busy/idle condition of any associated channel of the network access server to the switch because doing so increases the interoperability of the network access server, allowing it to be connected to the switches of different manufacturers.

13. Regarding claim 4, the combination of White in view of Fratto and further in view of Carson, as applied to claim 1 above, teaches the invention substantially as claimed. The combination of White in view of Fratto and further in view of Carson does not teach the additional limitation of claim 4. Official notice is hereby taken of the fact that it is known in the art to allocate the channels of a hunt group across multiple access servers. In such a system, any new client service requests that may arrive during a busy condition of the network access server are automatically routed another network access server operatively coupled with the service request switch. It would have been obvious to one of ordinary skill in the art at the time the invention was made to distribute a hunt group across the multiple access servers of White because doing so would increase the reliability of the system.

14. Regarding claim 8, it is a method claim similar in scope to claim 2 but uses slightly different terminology. Claim 8 is

directed to a method for temporarily taking a network access server offline for service while claim 2 is directed to a method for performing maintenance. Claim 8 has no step corresponding to claim 2's step of determining whether off-line maintenance is needed. So in this sense, claim 8 is broader. Claim 8 refers to busying out any unused channels while claim 2 refers to communicating a busy condition of any associated channels. Claim 8 refers to awaiting substantial non-use while claim 2 refers to monitoring. Although claims 2 and 8 differ in scope, there is subject matter, such as the combination of White in view of Fratto and further in view of Carson as applied to claim 2, that falls within the scope of both claims. Accordingly, separate reasons for rejection are not necessary here, and the Applicant is directed to the remarks above with respect to claim 2.

15. Regarding claim 9-10, the reasoning used to reject claim 4 applies equally to them.

16. As to claim 11, Carson teaches a method further comprising scheduling the service manually by command to the given access server (Col. 9 lines 42-45).

17. Regarding claims 16-17, they are computer-readable medium claims corresponding to method claims 1-2, respectively. Since they do not teach or define above the information in the

corresponding method claims, they are rejected under the same basis.

18. Claims 5-7 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over White in view of Fratto and further in view of Carson, and further in view of Fratto, M., Accessing the Enterprise: Large-Scale RAS to the Rescue, Network Computing, pp 1-8, April, 1999, hereinafter Fratto II.

19. Regarding claim 5, the preamble will be given patentable weight since the claim body refers back to the preamble. See the telco switch at line 6. White teaches the invention substantially as claimed by disclosing an apparatus comprising a network access server Fig. 7 elems. 96 & 98) operatively coupled with a telephone company (telco) switch (Fig. 7 elem. 94).

20. White does not teach the remaining limitations of claim 5.

21. Fratto on the other hand teaches an access server with the ability to busy out all modems (i.e., associated channels) of a server when a system manager manually initiates preventive maintenance (p. 3 5th complete paragraph).

22. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Fratto with the access server of White because of Fratto's

teaching that this capability is a *basic* modem management function (p. 3 5th complete paragraph).

23. Although the combination of White in view of Fratto teaches a telco switch coupled to an access server including a general busying out capability, the combination of White in view of Fratto does not teach the specific limitations of:

a. A scheduler for scheduling off-line maintenance for a given network access server;

b. A channel usage monitor responsive to said scheduler for monitoring usage of the associated channels of the given network access server;

c. A make-busy mechanism responsive to said channel usage monitor and coupled with the telco switch for signaling the telco switch that all channels are busy and whereby maintenance is performed on the given network access server after said signaling and upon a determination by said channel usage monitor that no channel is currently in use.

24. Carson on the other hand teaches a system comprising:

a. A channel usage monitor responsive to a *system administrator manually initiating maintenance* for monitoring usage of the associated channels of the given network access server (Col. 9 lines 42-45; Col. 11 lines 9-12);

b. A make-busy mechanism responsive to said channel usage monitor and coupled with the telco switch for signaling the telco switch that all channels are busy (Col. 10 lines 57-61) and whereby maintenance is performed on the given network access server after said signaling and upon a determination by said channel usage monitor that no channel is currently in use (Col. 11 lines 9-16).

25. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of White in view of Fratto by substituting Carson's specific teachings for busying out a network device for the combination's general teaching of busying out the network access server, thereby teaching the invention as claimed. This combination would have been obvious because of Carson's teaching that its method reduces interruptions to users of the system (Col. 1 lines 19-24).

26. The combination of White in view of Fratto and further in view of Carson does not teach a system including a scheduler for scheduling off-line maintenance for a given network access server and a channel usage monitor responsive to the scheduler. As discussed above, the combination teaches a system in which a system administrator manually initiates maintenance.

27. Fratto II on the on the other hand teaches a scheduler for scheduling/initiating off-line maintenance for a given network access server (p. 5 3rd complete paragraph).

28. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Frato II's scheduler with the system of the combination of White in view of Fratto and further in view of Carson by having a scheduler automatically initiate maintenance on the combination's access server by busying out the channels. This combination would have been obvious because automating maintenance tasks through use of a scheduler reduces labor costs.

29. Regarding claim 6, the combination of White in view of Fratto and further in view of Carson and further in view of Fratto II teaches the invention substantially as claimed. See the rejection of claim 5 above. The combination does not specifically teach the additional limitation of claim 6. White does however teach that the central office switching system is connected to the access server via POTS or plain old telephone service connections (Col. 15 lines 13-16). Official notice is hereby taken of the fact that POTS connections use a standard signaling protocol to communicate the status of associated channels. White therefore teaches a system in which a standard communication protocol is used to communicate between the network

access server and the service request switch. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the standard signaling protocol to communicate the busy/idle condition of any associated channel of the network access server to the switch because doing so increases the interoperability of the network access server, allowing it to be connected to the switches of different manufacturers.

30. Regarding claim 7, a system wherein the signaling by the make busy mechanism is performed via a standard communication protocol is also in accordance with predefined network software, firmware, and hardware infrastructures. Software, firmware, and hardware infrastructures make up the structure in which a network protocol is implemented. In addition, a standard protocol is inherently predefined. Accordingly, the remarks given with respect to claim 6 apply equally to claim 7.

31. Regarding claim 12, the combination of White in view of Fratto and further in view of Carson, as applied to claim 8 above, teaches the invention substantially as claimed.

32. The combination of White in view of Fratto and further in view of Carson does not explicitly teach the additional limitation of claim 12.

33. Fratto II on the on the other hand teaches a scheduler for scheduling/initiating off-line maintenance for a given network access server (p. 5 3rd complete paragraph).

34. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Frato II's scheduler with the system of the combination of White in view of Fratto and further in view of Carson by having a scheduler automatically initiate maintenance on the combination's access server by busying out the channels. This combination would have been obvious because automating maintenance tasks through use of a scheduler reduces labor costs.

35. Regarding claims 13-15, they are computer readable media claims corresponding to apparatus claims 5-7, respectively. Since they do not teach or define above the information in the corresponding apparatus claims, they are rejected under the same basis.

Response to Arguments

36. Applicant's arguments filed on June 4, 2002 (paper no. 3) have been fully considered but they are not persuasive.

37. The Applicant is arguing in substance that none of the prior art of record teaches the following: (a) monitoring a used associated channel and waiting until the same becomes substantially unused; (b) monitoring any used associated channel and, during such monitoring, awaiting substantial non-use of any remaining associated channels and thereafter communicating a busy condition thereof to the service request switch; (c) a maintenance scheduler for scheduling off-line maintenance for an access server; (d) the performance of maintenance *after* a channel-busy signal from a make-busy mechanism and after a determination by a channel usage monitor that no channel is currently in use; (e) how to integrate Fratto II's scheduler into the maintenance method and apparatus as claimed.

38. As to point (a), the Applicant argues that neither White, Fratto I, nor Fratto II discuss the "patient waiting" for a channel to become idle or unused. The Examiner agrees with this argument because the rejection relies upon Carson for teaching this feature. However, the Applicant also asserts that Carson fails to teach this feature. The Examiner respectfully disagrees. The most relevant portions of Carson are Figure 5

steps 510-513 and 520 and Column 10 line 32 to Col. 11 line 16. In Figure 5, step 511 shows the system monitoring the busy condition of the CO line/channel. If the line is busy, the process flow continues to elem. 520, where the user can force the process to terminate (Col. 10 lines 64-68). If the user does not force the process to terminate, the functional flow continues back to step 511. The flow diagram therefore teaches an indefinite wait while the system loops through steps 511 and 520 until the CO line becomes idle, absent user intervention. The Examiner therefore fails to support for the Applicant's assertion that users are booted almost immediately upon receipt of the busy-out command sequence.

39. As to point (b), the remarks given above with respect to point (a) apply equally here. In addition, Carson teaches a system that communicates a busy condition of a channel to a service request switch (Fig. 5 elem. 512; Col. 10 lines 56-61).

40. As to point (c), the Applicant argues that Fratto II's teaching of the need for a maintenance scheduler is evidence of long felt need and is therefore evidence in favor of a conclusion of nonobviousness. This argument is not deemed persuasive. The relevant portion of Fratto II is a product review of the Shiva LRAS DPS. Fratto II says that "without a scheduler you have to ensure that personnel will be on hand to perform the upgrade

during slow periods - often after working hours" (p. 5). In the next paragraph, Fratto II states that the Shiva LRAS DPS has not kept up with improvements in uptime and management (p. 5). When Fratto II's statement regarding the scheduler is considered together with the statement regarding the Shiva LRAS DPS's failure to keep pace with improvements in management, a person of ordinary skill in the art at the time the invention was made would reasonably infer that Fratto II's statement regarding the scheduler is a criticism of the Shiva LRAS DPS for failing to include a known, useful feature of remote access servers. Fratto II is therefore evidence of obviousness, not evidence of nonobviousness as the Applicant contends.

41. As to point (d), Carson teaches that pool administration (i.e., maintenance) occurs only after all stations of the system are idle and after all lines in the system are in a forced busy state (Col. 1 lines 40-54; Col. 10 lines 32-44). Carson teaches a make busy mechanism (Fig. 5 step 512; Col. 11 lines 9-16) that signals the central office switch that a CO line is busy and a channel usage monitor that determines whether a channel is currently in use (Fig. 5 step 511; Col. 11 lines 9-12).

42. As to point (e), the combination of White in view of Fratto and further in view of Carson teaches a system in which a user/administrator *manually* initiates the busying out of channels

connecting the remote access server to the service request switch (Carson Col. 9 lines 43-45). Fratto II's scheduler is a way of automating this manual task of initiating maintenance since Fratto II teaches that, with a scheduler, personnel do not have to be *on hand* to perform maintenance (p. 5). So at the level claimed, the Examiner fails to show the references do not teach how to integrate Fratto II's scheduler with the system of the combination of White in view of Fratto and further in view of Carson.

Conclusion

43. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Caldwell, whose telephone number is (703) 306-3036. The examiner can normally be reached on M-F from 9:00 a.m. to 5:30 p.m. EST.

If attempts to reach the examiner by phone fail, the examiner's supervisor, Meng-Ai An, can be reached at (703) 305-

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9678. Additionally, the fax numbers for Group 2100 are as follows:

Official Responses:	(703) 746-7239
After Final Responses:	(703) 746-7238
Draft Responses:	(703) 746-7240

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at (703) 305-3900.



Andrew Caldwell
703-306-3036
August 16, 2002